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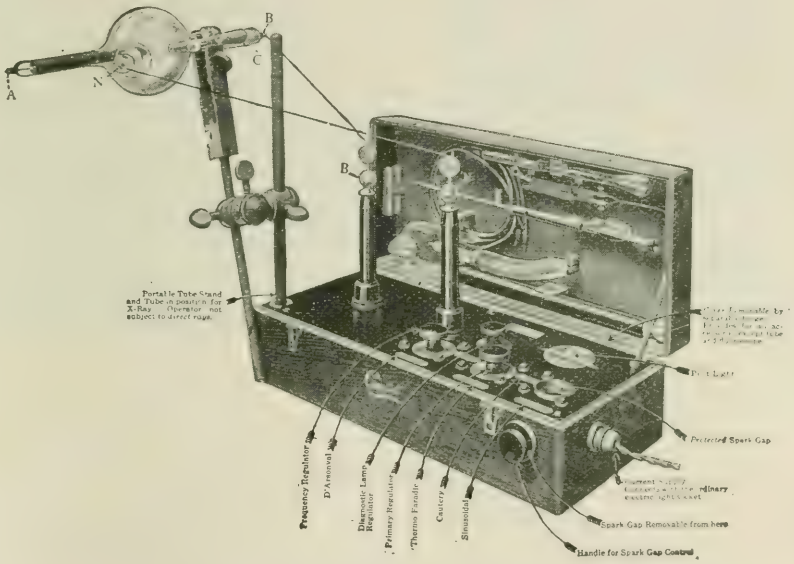

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Original Communications

CONSTIPATION—MEDICAL TREATMENT.

By E. S. McKee, M. D., Cincinnati.
Gynecologist to the Cincinnati Polyclinic.

Com with and stipare to cram, crowd or press together. Shakespeare well describes it, "Constipated matter close compressed." My paper is limited to the medical treatment of constipation, which excludes not only the most interesting, but also the most valuable part of the treatment. Medicine in constipation should be and is a dernier resort. We have intestinal constipation, delayed passage of feces through the rectum, though defecation may be normal; second, where there is no delay of feces till final expulsion should take place, termed by Hertb, dyschesia. Treatment which would be appropriate to the one variety will often be quite inappropriate to the other. Many cases of headache, dizziness, drowsiness, indefinite pains, loss of ambition, catarrh of nose and throat, tachycardia, are merely symptoms due to constipation, and respond to treatment for that condition. Those who are not in possession of an X-ray may tell whether constipation is in colon or sigmoid flexure as follows:

Administer carmin to the patient. If found in the stool the next day, transit through the bowels is normal; if no carmin in stool, delay is in colon. If no stool, give injection sufficient to clear out

the sigmoid. If this shows carmin colored stools the delay is in the sigmoid.

It is like carrying coals to New Castle, to talk to the medical profession about the medical treatment of constipation. Yet it is a subject which we have always with us. Calomel and soda are known to you all, and are excellent remedies under certain conditions, and if properly administered. Should be given in small and frequently repeated doses and should not be commenced unless you are able to finish. Torpid liver, furred tongue, bilious condition, are the indications. My favorite pill is the aloin strychnia and belladonna pill, which meets more indications better than any other. Waugh's laxative, a similar pill with some additions is also good. It has the advantage of being divided into much smaller pills so that one can give it to children and graduate the dose much more exactly to the adult. Cascara sagrada and podophyllin have their niches in the treatment of constipation and fill them very worthily. Pill hepatic Merrill is a valuable one.

Laxatives, such as rhubarb and compound licorice powder, may be given at a time, probably in the afternoon, which experience teaches will bring about a stool before bedtime. Salines, Rochelle and Epsom salts and the natural purgative waters are best taken in the morning on an empty and unoccupied stomach. Where there are hemorrhoids present it is best to cause an evacuation before retiring, for they are apt to come out on defecating, and are easier to replace and retain when the patient assumes the recumbent posture. Croton oil should not be given in hemorrhoids, and aloes are also injurious. Severe purgatives should be avoided in piles. Liquid alboline, one drachm to one ounce after meals, will often soften stools and cause evacuation when they are hard and costive. It is not objectionable to take salve for an oily taste. Rectal injections of parafine for chronic constipation have been extensively practiced by Lipowski. He makes the injections in the evening with the patient in the knee-elbow position. The parafine is warmed till liquid and passed through a warm funnel. This effective, easy, simple method prevents absorption of fluid from the rectum.

The colon is happier and more contented when full, hence se-

vere purgatives sometimes defeat the object for which they were given by a secondary constipation. Prolonged purgation exhausts torpid bowels and perpetuates constipation. The dose of an aperient, hence, should not be in excess of that sufficient for a gentle evacuation in the particular individual attended. Objects to be remembered in the treatment of constipation are to evacuate the gases which tend to distend intestines and prevent contraction of muscular coating, tone up walls of bowel and prevent accumulation of feces and to increase the flow of intestinal mucus. Constipation from excessive peristalsis often causes an intractable variety which is best treated with atropine. Habitual constipation is one of the penalties of civilization, and each case is a study in itself. Opening the bowels does not cure constipation, but in many cases relieves for a few hours one of its symptoms.

Constipation from atony of the bowel often necessitates direct visual inspection. The patient may suffer from chronic constipation, but the catarrhal affection causes a scant serous stool every three or four hours. Defecation is painful, but there is no blood in the stool. Hard lumps of feces are found hidden in the sigmoid folds. Rest the rectum with laxatives and give it a chance to recuperate. Inject weak solutions of the silver salts ofter each stool. Left untreated, the condition becomes serious; if taken in time it readily responds to simple treatment.

Enormous quantities of strong cathartic pills are used by the public in self-medication, which often aggravate the condition for which they are taken. Laxatives should be preferred to purgatives, except in a few instances, mostly in the beginning of the treatment. Not till diet and hygienic methods have failed should we call in the aid of medicines.

Constipation in women is so common as to be constitutional, nay physiological. It gives them constant training for the ordeal of parturition. Indeed it is so common that the woman who is not so is quite out of fashion. It is of course easily explained by their mode of life, the readiness with which they defer defecation from inconvenience or from mock modesty. We have constipation in women due to retroflexion of the uterus and to contraction of the rectum by adhesion and contraction of sacro-uterine liga-

ment. The bowels next in frequency to the stomach sympathize in the various diseases peculiar to women. Gaseous collections and commotions in the bowels may simulate pregnancy. We have constipation in pregnancy due to the pressure of the enlarged uterus on the rectum. There is nothing very peculiar about the treatment of constipation in women except to avoid irritant cathartics during pregnancy. Such as aloes and cascara might produce uterine contractions. The chronically constipated woman is reduced to the necessity of many and varied laxatives, which only temporarily relieve in the majority of cases, and do not permanently cure.

Constipation in children is a very important subject. In them it is difficult to treat, especially in infants, and the time for the cure, and especially the prevention of the constipation, is very opportune. I can not refrain from mentioning the importance of hygiene and habit in constipation in the child. The baby should be put on the chair at regular hours. Nothing should be allowed to interfere with the movements of the bowels. In children the prolonged administration of small doses is preferable to the occasional use of large ones. Calomel in dry white stools with flatulence. Phosphate of soda is the best saline for prolonged use in infants. Malt possesses slightly laxative properties and can be advantageously administered to children. Also olive oil. The same drugs are useful as in adults. We should have the same objects as indicated above. Suppositories, oiled paper and soap help establish regular habits. Glycerine injections are good, but prolonged effects often bad, resulting in catarrh proctitis. Gluten suppositories are slower, but have not the ill effect of soap and glycerine. Drugs when used in suppositories are open to the fewest objection. Suppositories give the best results when seat of trouble is in the rectum and colon. They have little effect when trouble is in small intestine. The remedies used in suppositories are much the same as those per os. The best laxatives by the mouth are castor oil, fluid magnesia. If there is gastro-intestinal irritation, rhubarb and soda or grey powder. Olive oil may be sufficient in mild cases, or cream in infants.

Hypodermic Purgation.

Medicine and surgery both stand in need of a remedy which can be introduced subcutaneously with ease and comfort to the patient, and which is quick and reliable in its results. Therapeutists and pharmacologists have for years been studying and experimenting with this end in view and not without encountering many difficulties.

Most of the remedies here discussed have serious drawbacks to their general use, but the question is nearing a solution, and continued study is recommended. We need something which will act on the intestinal tract, and on that only, without any untoward effects on any other part of the body. Especially is it desirable that this hypodermic purgative be given free from irritation at the point of puncture and subsequent abscesses and necrosis of tissue. Such a perfect hypodermic purgative must be readily soluble, preferable in water, in order that it will not be necessary to inject a large quantity. It will in many instances be desirable that the effect be produced in a short time, while in others a slow and prolonged action is preferred. The conditions in which hypodermic purgatives are desirable may be mentioned as marked gastro-intestinal irritability, children, insane, inebriates or hysterical persons who may refuse utterly to take medicine by the mouth, in coma and in certain cases of chronic constipation and after certain operations. Abdominal operations are an especial field for hypodermic purgation. The remedy can be introduced under the skin during anæsthesia and a mild purgative effect of for instance, phenolopthalein will appear the next day and its prolonged purgative effect continuing mildly for a number of days may dispense with the necessity of introducing any other purgative after the operation. That this happy condition is not yet attained, but that it is nevertheless attainable, may be surmised from reading further.

Altropine has been known to produce peristalsis when introduced hypodermically. It has not met with much favor on account of its action on the other secretions of the body.

Digitalis, pilocarpine, phystostigmine and muscarine produce a

cathartic effect when introduced hypodermically in sufficient doses, but the ill effects which accompany them prevent their use in this way for this purpose.

Cathartic acid, the active principle of senna, has been used by Castle and Dudley. They injected cathartic acid in kittens in gradually increasing doses. Two grains, hypodermically, were found to produce free catharsis in ten hours, which continued for several days. The stools were first hard, then soft, then clay colored.

Colocynthine is regarded by Heller as the most suitable for hypodermic purgation. This, aloes and cathartic acid, are all serviceable, but they are highly irritant, and the local reaction at the point of insertion is frequently severe. They are to be recommended in exceptional instances where the indications are imperative. Sloughing of the tissues may be expected to follow the injection in many instances.

Croton oil and castor oil have been experimented with. Catharsis was so slow in following that its connection with the remedy was doubtful. Painful swelling occurred at the point of insertion. Brunton found that elaterin acted as a purgative only in the presence of bile, when taken internally. One-twentieth to one-tenth grain hypodermically on kittens produced stools within an hour otherwise without effect.

Veratrine and also barium act on the involuntary muscles, but they have no selective action on the muscles of the intestine. Osterman used injections of atropine, in the hope of depressing inhibitory fibres of the sphlancnic, and usually produces evacuation of the bowels in from 12 to 36 hours.

Podophyllin.

Brunton says that the resin of podophyllin acts on the bowel when injected subcutaneously as well as when introduced into the intestinal canal. However, considerable inconvenience is felt at the seat of the injection, occasionally resulting in necrosis of tissue. It may be taken as the best example of that group of vegetable cathartics solutions of which when introduced under the skin

produced increased peristalsis. Podophyllin injected under the skin produces purgation in from twenty minutes to one hour. Podophyllin was found by Powwissotsky to contain in the root and resin podophyllitoxin which was the active purgative principle; also another active principle called picropodophyillin. These two resins, one is soluble in ether and alcohol and the other in alcohol alone. Podophyllitoxin injected under the skin of a terrier produced seven liquid stools within three hours. Injected subcutaneously in a cat and the cat killed a few hours later, the gut from near the stomach to the large intestine showed marked congestion. An alcoholic solution of this membrane and its contents shows the presence of podophyllitoxin. Braun, in 1880, reported that he had used podophyllitoxin subcutaneously as a purgative in children and found that it represented podophyllin completely. To a child 13 years old he gave 6-100 to 8-100 of a grain. Mackenzie and Dixon injected ½ grain of podophyllin in a bull terrier. In 25 minutes the dog was restless, in 35 minutes had normal stool followed by diarrhœa. In two hours eight fluid motions were were passed. They injected 2-5 grain of podophyllitoxin in a cat. At 12 it vomited, at 2, semi-fluid evacuation, at 2:30, at three, increased purgation, slime and bile, at 4 p.m. evacuations containing fluid blood and mucus. They found that podophyllitoxin and podophyiresin both exert their specific action when injected hypodermically, but in man caused so much irritation as to militate seriously against their use.

Eserine.

The salicylate of eserine has been extensively experimented with by Craig of Boston and Vineberg of Mt. Sinai Hospital, New York. In Milligram dose hypodermically every three hours they found that it produced catharsis in 50 to 75 per cent of the cases. It will not act on the muscular coat of the intestine if the same is distended with gas so as to be paralyzed. Its action on the muscular coat of the intestine is much like that of ergot on the uterus. It does not cause a flow of fluids into the intestine. It has been much used by gynecological surgeons to overcome in-

testinal paralysis following abdominal operations; also to overcome intestinal atony following parturition or to dispel gas from a distended intestine. Sometimes it is given immediately after an operation to ward off paresis. It is given in 0.02 or 1-3 grain doses. Packard goes into the subject thoroughly in a paper on eserine in intestinal atony. In case of plumbers trap obstruction of the intestine to gases he gave 1-150 grain eserine salycilate hypodermically. In two hours after the injection the patient expelled a large amount of fluid and gas, and the abdomen became soft and flat. Calabar bean has been given by veterinarians for colic in horses. Dr. J. C. Reeve, of Dayton, has given eserine hypodermically in doses of 1-12 grain, 0.005. Such large doses are unnecessary if not dangerous. Eserine can hardly be considered a suitable or successful hypodermic purgative.

Salines Subcutaneously.

Magnesium sulphate via the stomach is very slightly absorbed, and its cathartic effect depends largely on the osmotic power of abstracting water from the surrounding tissues until an isotonic solution is obtained. One decigram hypodermically in a man has caused purgation. The injections should be made in the arm and in doses of one decigram of one and a half grains in a 2or 3 per cent solution. Results occurred in a majority of cases, though not uniform. It is needless to say that the effect of magnesium sulphate hypodermically is produced in an entirely different way than by the mouth, and exerts a separate action not found when administered by the mouth. The above dose under the skin usually produces an evacuation in from five to seven hours. It has been suggested that these injections, if given in the abdominal wall, might cause purgation by reflex irritation. It has also been objected that toxicity might occur if injected directly into the blood. Aubert, in 1857, stated that intravenous injections of sodium sulphate produced purgative effect. Claude Bernard recorded the same fact in the same year, and Headland in 1859. None of these writers gave any experimental proof of the same. MacCallum experimented with intravenous injection of salines

and found that those which caused purgation by the stomach or intestine have the same action intravenously and subcutaneously. He found that barium chloride possessed the purgative property in the greatest degree, that the purgative effect is produced by increased secretion as well as increased peristalsis, and that the purgative effect can be counteracted or abolished by calcium chloride. Eckhardt's experiments were not favorable to the use of salines subcutaneously. Bancroft repeated MacCallums experiments and came to the decision that sodium citrate and barium chloride subcutaneously and sodium sulphate intravenously act as purgatives. Barium chloride is frequently used by veterinarians subcutaneously as a purgative, one gram in this manner being sufficient to purge a horse weighing 1,000 pounds. It is, however, so poisonous as to be unsafe for general use. These investigations throw some light on this subject, and though intestinal peristalsis is undoubtedly increased by some of these salts yet the resulting purgation is not obtained without attending dangers which destroy their practical importance.

Morphine and its Derivatives.

Morphine, hypodermically, in large doses, in some cases produce purgation and also vomiting. Apomorphine, a powerful emetic, has some effect on the intestine. Codeine produces purging in animals and man more readily than morphine, while apocodeine brings on purging devoid of vomiting. The morphine group offers the greatest hope for the solution of the difficulty. Raviart was the first to use apocodeine subcutaneously for purgation and to report favorable results. Apocodeine, 0.03, produced, subcutaneously, in dogs and cats, purgation in from five to thirty minutes, while in man 0.03 or ½ gr., will produce a soft movement in an hour. It should be administered in a one or two per cent neutral solution, which should be filtered. So prepared there is no feeling of nausea, and the irritation from the injection passes off within an hour. Apocodeine lowers blood pressure, causes vaso dilatation and increases peristaltic movements, which is probably due to its sedative action on the sympathetic inhibitory ganglia.

Raviart and Barton, in 1890, used apocodeine in 34 cases of constipation subcutaneously and successfully. Guinard, in 1903, used it successfully in eight cases of constipation. Heintz, in the same year, tried it in thirty cases, in half of which he was successful. He found it uncertain, though it worked well in many cases. Most experimenters found that the purgative action came on quickly after the injection, sometimes within one or two hours. Heintz gave the purgative action as occurring in from 10 to 12 hours. The preparation in general use is the hydrochlorate and the dose is small, from 0.02 to 0.05 gm. The absence of influence on the stomach from apocodeine hypodermically is explained by the fact that the sympathetic gives off but few if any fibres to the stomach. It does not act centrally upon the brain, for increased peristalsis can still be seen when the vagi and cord are cut. It can not act on the extreme periphery, for if applied to the living intestine direct all movements discontinue. Injection of apocodeine in anæsthetized dogs and cats shows that certain ganglionic cells are paralyzed. After the injection stimulation of the chorda gives no increased submaxillary secretion, although the secretory neurons are active, because the exhibition of pilocarpine will give rise to a greatly augmented secretion. Apocodeine comes nearest to being the ideal subcutaneous purgative, though there are objections to it. Unfortunately, though readily soluble in water, it is an irritant to a certain degree, many patients having complained of the pain and an occasional abscess. This, however, may occur with almost any remedy used hypodermically. Its action is usually short of duration, the constipation generally returning in a day or two. Its action on the numerous organs are too numerous and complex, and involve too many symptoms.

Phenolpthalein.

Fleig has separated a soluble salt of phenolphthalein, which he calls sodophthall, and which he relates is being used with success as a hypodermic purgative in the clinics of Montpelier. The chemical composition of the salt does not seem clear. Probably it is the diosodium salt of phenolophthalein which has been de-

scribed by Mayer and Marx and which is made by the addition of sodium hydroxid to phenolophthalein. A very soluble salt, combining a very weak acid with a strong base, it is readily hydroidizable and acts like a solution of the alkali itself, that is, it is decidedly irritant. There does not seem a very bright future for this salt as a hypodermic purgative on account of its highly irritant character. Abel and Rowntree found that olive oil when heated would dissolve phenolphthalein and any of its derivatives and that this oil preparation injected under the skin of dogs produced purgation. Experiments proved that more prolonged purgation was induced when phenoltetra-chlorphthalein was employed than any other member of the group. Mode of preparation: Heat neutral olive oil slowly to 210 c. Add finely powdered phenoltetra-chlorphthalein, stirring all the time. The heating is continued for five minutes and the temperature not allowed to exceed 220 c. The oil solution while hot is filtered into sterilized flasks and put aside for use. This will dissolve the chlor body at the rate of about 0.2 gram to every 10 cc. of oil, while it will dissolve the phenolphthaleine itself in a slightly greater degree. For fear of saponification it is best not to prepare too much at once. Phenolophthalein shows a tendency to come down, but the chlor body does not precipitate. The drug is practically absorbed in its entirety from the local seat of the injection into the general circulation in from 16 to 24 hours. Part of the drug is reabsorbed from the large intestine, which prolongs the purgative action. Prolonged experimentation on forty dogs showed that injection of this body in neutral oil was not followed by any untoward results, either locally or systematically, and that no system other than the alimentary was affected. A series of experiments were conducted in John Hopkins Hospital, giving injections of this remedy to patients in the obstetrical wards. Some received it in lieu of the initial purgative, others when a purgative was indicated later in the lying in period. The results were not entirely satisfactory, but it is thought that the doses were too small. A decided laxative effect was obtained, however. The stools became softer, semi-fluid, porridge-like, and in one instance contained the drug as late as the fifth day. In none of the cases

did local inflammation or irritation occur, nor were griping pains or colic complained of. No drug could be found in the urine or milk. Experiments were made on thirty cases of chronic constipation in the clinic at John Hopkins Hospital. The striking feature of this study was the prolonged action of the drug. In many purgation persisted for four or five days. Experiments show the advantages of this remedy to be, the prolonged nature of its action, absence of crampy pains and colic, the constancy of results. Objections: insolubility of drug in water, slight solubility in oil, slow action—18 to 24 hours—mild character of action, laxative rather than purgative.

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Proceedings of Societies

ACADEMY OF MEDICINE, CINCINNATI, OHIO.

Meetings for March.

NOTES.

Dr. Martin H. Fischer is chairman of the Committee on Public Lectures. Many members have been added to the committee. Efforts have been made to ascertain the names of societies and organizations that desire to have a lecture or course of lectures delivered to them. The committee desires to have reasonable assurance of an audience and then the speakers will be assigned. The following have been added to the committee: Drs. Bernheim, Starr Ford, Boswell, Edith Smith, Edmund Baehr, J. A. Thompson, Elizabeth Campbell, Zenner, Dudley Palmer, Morgenstern, Frank Lamb, Louis Stricker, Westlake, Stoll and Goosman.

Dr. E. M. Baehr presented a patient with obscure neurological symptoms. Boy, nineteen years. History of vomiting, staggering, nystagmus for eight months; in early childhood history of keratitis, choked disc on right side. Patient over size and has large frame. Some inco-ordination of voluntary muscles; severe headache. Diagnosis between cerebellar neoplasm, disseminated sclerosis, or hereditary lues. Case will be presented again later.

Dr. Moses Salzer reported a case of artificial resuscitation of a new-born infant where the NO_2 oxygen apparatus was used. Oxygen alone was used to inflate the child's lungs, with perfect result.

Dr. E. O. Smith has a case report of nephrectomy for tubercular kidney. Early diagnosis by ureteral catherization and demonstration of the tubercle bacillus in stained specimen. Perfect function of sound kidney followed operation. Discussed by Dr. A. W. Nelson.

At the regular meeting of the Cincinnati Academy of Medicine, March 3, 1913, the following resolution was passed unani-

mously, and, by order of the Academy, the secretary was instructed to send a copy to each member of the Hamilton County Legislature, hoping for their coöperation in the matter referred to:

WHEREAS, Proposed legislation to establish a State Board of Registration for Optometrists would give incompetent pretenders a fine opportunity to treat the most delicate of human organs, the eye;

WHEREAS, The duty of the medical profession in protecting the health of the public includes the exclusion of uneducated, dishonest and incompetent men from any department of practice;

Resolved, Therefore, the Academy of Medicine of Cincinnati, requests all our Representatives to vote again H. B. No. 116, Mr. Carroll, entitled, "A Bill to Regulate the Practice of Optometry."

Dr. Robert Sattler presented a patient, about twenty years old, with a history of double ectropion in both eyes from childhood (upper and lower lids being affected). Patient was of the degenerate type. Had great difficulty from injury to the cornea due to inability to close the lids at any time, and was confined to the house by it. The lids were both operated, and, owing to the enormous deposit of fibrous tissue, it was necessary to skin graft to cover the deficiency. The lids were still united by suture when the case was presented.

Dr. Derrick T. Vail read his paper on "A Study of Congenital Cataract, with Special Reference to its Clinical Significance." Dr. Vail took up the embryology of the development of the lens, the possibility of the absence of the lens and the relation of changes in the blood supply to the congenital anomalies and causes of the different clinical types of congenital cataract. The opening in the posterior sheath of the lens capsule and its relation to conical cataract, and the development of opacities in the lens due to the conversion of the hyaline substance into connective tissue were discussed. Special consideration was given nuclear cataract and the methods of dealing with it by operation.

Dr. Robert Sattler, in discussion, said the subject could be divided clinically into two classes: (1) Those where the other

structures of the eye were normal; (2) those where the entire globe was affected by shrinkage or other deformities. In the first group operation was advisable; in the second group operation was not advisable. Iridectomy was the operation of choice in many cases.

Dr. Jesse Wyler divided the condition into two classes, viz., congenital malformations and those due to intrauterine inflammations, and spoke of the experimental production of congenital cataract by Pagenstecher and von Silly.

Dr. Louis Stricker took exceptions to the view that we ever have congenital absence of the lens, saying that with proper search some effort at lens formation will be found in most of these cases. Etiologically we must look for an altered blood supply or some nutritional disturbance.

Dr. M. L. Heidingsfeld read a short paper on "Some Affections of the Nails," illustrating personal cases with lantern slides, taking up the pathology and contradicting some of the commonly accepted theories as to etiology. He demonstrated that pathologically we may expect to find the etiology in the tissues of the matrix, thereby altering the nutrition. Considerable space was given to entire absence of any nail substance (congenital) on fingers or toes.

Dr. William Gillespie presented a patient (baby) and reported a case of fatal puerperal eclampsia in which the mother was delivered of a living child, after the death of the mother, by a Cæsarean section performed by Dr. Wright, the interne on duty at the City Hospital.

Dr. Ramon Guiteras, of New York, addressed the Academy on "Surgery of the Kidney." Dr. Guiteras presented a large number of lantern slides from drawing and photographs made from his almost wonderful private collection. The address was full of the rather unusual types of cases ,and represented the cases that give the most concern. Dr. Guiteras dwelt on the anomalies, and spoke of having seen three cases of single kidney in ten months' service.

Dr. S. P. Kramer then reported cases of instant death from the intra-spinal injection of serum in cerebro-spinal meningitis.

Dr. Kramer made experiments on animals, showing the effect of serum applied directly to the floor of the fourth ventricle. Injection of trikresol in ½ per cent solution causes the same result, and Dr. Kramer takes the ground that the preservative in the serums causes the trouble. Dr. Kramer advised against the use of the serum in young children.

A motion by Dr. Oliver that a committee of three be appointed to investigate this matter and report to the Academy prevailed. A suggestion was made that the committee ask the aid of experimental laboratories such as the Rockefeller Institute.

Dr. Berghausen held the Academy ought not to go on record as condemning the serum in young children. As different strains of bacteria give varied results with the serums, he believed that each large city should furnish the serum laboratories with bacteria, and it would probably be better to have a polyvalent serum made and use that.

Dr. Wolfstein took exception to the claim of Dr. Kramer that the different nuclei in the floor of the fourth verticle would be so differently affected from the serum alone. Dr. Faller also discussed the report, Dr. Kramer closing.

The Chair appointed on the committee to investigate the effects of spinal injection of serum, Dr. S. P. Kramer, Dr. Berghausen and Dr. Wagner.

Dr. W. D. Haines presented a specimen of colloid goitre removed ten days ago at the Jewish Hospital. It was a large unilateral goitre causing tracheal tugging and symptoms of hyperthyroidism except exophthalmus. It was difficult of removal on account of intimate attachment to the trachea and low position of lower pole, making it necessary to do a polar ligation of inferior thyroid artery. Patient recovered. Discussed by Dr. E. W. Mitchell.

Dr. Charles T. Souther reported the following two cases:

1. Gall-bladder and common duct stone. Stones were of distinctly different type. Operation was done by the transverse incision of Farr, including division of the right rectus muscle. Patient doing well on eighth day.

2. Amputation of extensive carcinoma of the breast. Using

large flap from opposite breast (extending to the loose, movable area of the sound breast) to cover the area. This shortens time in hospital and makes a very extensive operation possible.

Cases were discussed by Dr. W. D. Haines, who said he had used the gridiron incision devised by Dr. Souther in a dozen cases of gall-bladder work, and very much preferred it to division of muscles.

Dr. J. A. Johnson said he had tried the incision devised by Dr. Souther, and found that the size of the incision was rather limited, and he was not impressed with the method in the case he used it.

Dr. Souther said he was able to get a six-inch incision by the method previously published.

Dr. J. Ambrose Johnston presented a specimen of tumor removed from inguinal region (glands), which developed following injury to the thigh; probable carcinoma. Microscopic report will be made later.

Dr. J. E. Pirrung reported a case of perforating duodenal ulcer operated three hours after perforation. Hedonal anæsthesia; convalescence well established. No post-operative vomiting and no peritonitis.

Dr. Edwin M. Baehr read "Contributions to the Study of Epilepsy in the Last Two Years." Dr. Baehr's paper was a careful resumé of the best that has been written on this subject the last two years. Statistics seem to show conclusively that alcoholism in all its forms has a definite relation to the frequency of epilepsy, and the hereditary element is as potent as any other etiological factor.

Discussed by Dr. Charles A. L. Reed, who discussed the relation of gynecological conditions to epilepsy, and said while double oöphorectomy was at times followed by relief of the type that developes at puberty, many cases were discouraging in results.

Dr. Frank L. Rattermann read a paper on "Diagnosis of Diseases of the Alimentary Tract." Dr. Rattermann confined his paper largely to the proper conduction of a physical examination of patients suffering from alimentary disease, taking up procedures useful in detecting disease. Detail of technique of phy-

sical examination was laid on gastric conditions, and reference was made to gastric analysis and possible source of error in test meals etc. A strong plea was made for a careful analysis of the history, and the result of a careful physical examination.

Selected Articles

ADVICE TO PATIENTS ON LEAVING THE HOSPITAL AFTER SURGICAL OPERATIONS.

Leonard Freeman, M.D., Denver.

Comparatively little seems to have been written on this subject, in spite of its importance. The character of the advice will of course depend largely on the nature of the operation and of the condition for which it was done; but there are certain general considerations which will apply to the majority of cases unless some special contra-indication exists.

It was formerly customary to keep surgical patients in the hospital, and even in bed, for what is now known to be an unnecessarily long time, thus adding to their expenditures, decreasing their incomes, and consuming time which could otherwise be more profitably employed. The sum total of the loss to the community from this source was enormous. Gradually we have learned to reduce this loss of time, to the advantage of the patients and to the general advancement of surgery.

Surgical patients on leaving the hospital generally pass from under the observation of the operator, especially those living at a distance. Unless the surgeon takes the trouble to advise them, their future mental and physical welfare will depend on their own ideas and on the advice of those around them, including perhaps their family physician. Most patients have a very hazy conception regarding their conduct, their actions often being largely governed by groundless fears and traditions and by the advice of ignorant or oversolicitous friends. Even the family physician, if consulted, is not always a reliable guide, because of unfamiliarity with surgical questions or of lack of knowledge of the individual case. These things are unfortunate, and militate a-

gainst the prompt and smooth mental and physical recovery which should be the aim of every well-conducted surgical procedure.

To the surgeon all seems simple enough. With his superior knowledge it is difficult for him to realize the fears and uncertainties of the patient suddenly thrown on his own ignorant resources; and hence his instructions, if he gives any, are too hasty, meager and but imperfectly understood. I am convinced that the whole subject deserves more attention than has hitherto been accorded it.

The following outline represents my own ideas of the situation, which may not accord with those of others, but which will at least serve as a basis for consideration and discussion:

The surgeon should take time to talk over with each patient, before he leaves the hospital, his present condition, his prospects and his future course of action, explaining also, within the bounds of reason and expediency, the exact nature of the operation performed. As abdominal operations are the most frequent, I shall consider the advice to be given in connection with these; most of this advice applies to other surgical procedures also.

The patient should be told, when this can conscientiously be done, that the operation was successful and that everything necessary was accomplished. It should also be explained, when true, that the abdomen was explored wherever there was a likelihood of anything being wrong and that everything was in perfect condition. This is an important point for the patient's future peace of mind, and hence, according to the most modern principles of surgery, such exploration should be done when practicable. It is well to make this explanation as emphatic as circumstances will permit, no matter what exception it may be wise to make to relatives and friends. For instance, one is usually justified in saying:

"Everything is all right; not only in the region operated on, but in the rest of the abdomen you are in just as good condition as any one else. I know this to be true, because I have examined everything carefully. Even if you feel more or less pain and soreness in the future, you must not think that they mean anything more than the natural consequences of a surgical operation.

"You must bear in mind that an operation is a severe injury,

just as much as if you had fallen from a horse or had been run over by an automobile. The skin, with its many small nerves, has been cut, and the muscles separated and more or less strained and bruised, which is certain to produce soreness and stiffness that may persist for a long time, but which mean little and should be disregarded as far as possible. A similar soreness and stiffness would result from severe and unaccustomed physical exertion, such as climbing a mountain, but it would cause no anxiety and you would be sure of its speedy disappearance. The division of nerves in the skin may give rise to various uncomfortable sensations, such as numbness, oversentiveness and even actual pain in the scar; but these manifestations mean nothing, should be given but little attention, and will surely vanish in the course of time."

"All of these disagreeable symptoms are apt to be more pronounced at night, while you lie quietly in bed, with nothing else to occupy your attention. This is largely owing to the accumulation of gas within the bowels, which presses on the sore places from the inside much as if you pressed on them with your hand from the outside. If you do not bear this in mind you are apt to imagine that some dire calamity is fomenting within you."

In addition to some such talk as the above, it may be stated that the soreness following an operation is likely to occur in periods, brought on perhaps by overexertion, indigestion, barometric changes, etc., but that these spells signify little and should cause no mental uneasiness; that if they are regarded too seriously and with the idea that something is wrong inside, they may increase to such a degree that the patient becomes a nervous, hysterical semi-invalid—a nuisance to herself, to her physician, and to all those who are so unfortunate as to be associated with her. I say *her* because such cases usually occur in women.

The effects of this sort of introspection may advantageously be illustrated by referring to the fact that many medical students develop symptoms of the various diseases which they read of and hear about in their lectures. The patient will also get a better understanding of the situation if she will sit quietly down by herself, hold up her little finger in front of her and look fixedly at

it for fifteen minutes, concentrating her whole attention on it. Before the time has expired it is likely that the finger will be the seat of some very peculiar sensations, and there will be a strong tendency to give it a good rubbing. If this is true of a normal finger, how much more must it apply to the seat of an operation, with all the mysterious fears and uncertainties round it!

In order further to avoid the evils of introspection, the patient should be cautioned against describing the operation and the hospital experiences to curious friends. In fact the whole matter should be regarded as a more or less disagreeable episode, to be made little of and forgotten as soon as possible. In this connection the Germans have an excellent saying, *Schwamm darüber*—"sponge it out."

Emphasis should be laid on the fact that according to the mental attitude it is possible either quickly to overcome the effects of most operations or to nurse them along indefinitely, and develop a condition of semi-invalidism, by continuously "looking for trouble" and "making mountains out of mole-hills." Assure the patient emphatically that in your opinion she does not belong to this latter class of weak and nervous individuals, who are much to be pitied; but that you feel certain from your observation of her that she will conduct herself with sense and discretion and not allow herself to become hysterical and neurotic. It is often well to add that any nervous symptoms which may have bothered her in the past evidently had a good foundation, but that from now on there can be nothing to prevent her from rapidly regaining her normal equilibrum, and that you can easily see that she is one of those who are always cheerful, energetic and happy if only they have a fair chance.

Patients must be warned against trying to interpret their own symptoms; for even doctors, with their superior knowledge, can not trust themselves to tell what is going on within their own bodies. Above all, allowance must be made for the advice and statements of friends. There is nearly always some woman who, without appreciating that she is doing harm, will fill the patient's mind with forebodings of disaster, such as the development of hernia or the return of gallstones or of a malignant growth. Es-

pecially is this true of the woman who opposed the operation and who consequently desires to be able to say "I told you so." Explain that these objectionable pessimists can know but little about the subject, and at best must base their predictions on very few observations; while your own opinion, as the surgeon in the case, is supported by the knowledge gained in operating, as well as by the dictum of the entire medical profession, grounded on years of experience and investigation.

Abdominal Supporters.

Patients are always anxious regarding the character of abdominal supporters and the length of time during which they should be worn. The laity, as well as many physicians, regard them as of so much importance that the surgeon is compelled to give them an undue amount of attention. It should, I think, be explained that these "belts" are really of little service, except as they may confer a sense of security and comfort, or when ptosis exists. If there is a tendency toward rupture it will occur in spite of the belt, a fact that is quite generally recognized among surgeons. There is, however, such a strong prejudice in favor of belts that it would be unwise to advise against their use, for if any trouble should occur the surgeon would undoubtedly be blamed. Moreover most women are in the habit of wearing corsets and would feel uncomfortable without a support of some kind.

Fortunately a proper corset is just as good as a belt, or better. It should be of the long, "straight-front" variety and should be so laced as to push the whole abdomen upward. This may be done by employing two strings, the lower one being laced snugly and tied perhaps halfway up, while the upper one is fastened more loosely. It is neither necessary nor desirable to wear belts or corsets very tight. They should be used for purposes of support only and not for constriction, and should never cause discomfort. No pads or stays should ever rest directly on the incision; not only is such pressure useless, but also in recent wounds it may give rise to inflammation and pain, while in older cases it

favors atrophy and weakening of the scar. I have often seen much distress caused by the pressure of a reinforcing band or a corset-stay. It should also be made clear that it is unnecessary to wear a supporter of any kind while lying down at night.

Dressings.

When patients leave the hospital they are generally still wearing some sort of dressing held in place by a many-tailed bandage. They should be told that this is merely for the purpose of protecting the delicate scar, no virtue being attached to the cotton and gauze, and that the whole thing may soon be removed. Until then it is unnecessary to wear an abdominal supporter, its place being filled by the bandage. When the gauze and cotton are discarded they may be replaced by a folded handkerchief if the cicatrix is still tender.

It should also be stated that all danger of infection ceases as soon as the wound is healed. If this is not done, those who have had this danger constantly paraded before them while in the hospital may remain uneasy for many weeks, as I have often seen.

Constipation.

Immediately following an operation it is usually necessary to employ cathartics freely, which naturally leads to constipation. If nothing is done to overcome this it may cause permanent impairment of the natural activity of the bowels, requiring a more or less constant use of drugs; hence it is well carefully to advise patients in this regard. There are doubtless many good ways of doing this, but I have found the following method efficient:

1. On awakening in the morning, before getting out of bed, knead the bowels deeply and thoroughly, following the colon from the cecum to the sigmoid.

2. On arising drink a glass of cold water and take such calisthenics as are permissible under the circumstances, increasing these exercises as convalescence progresses.

3. Eat for breakfast such things as experience has taught are most likely to assist peristalsis—such as fruit and oatmeal.

4. Go to the water-closet as nearly as possible exactly at a stated time, the reason for this being that the bowels are "creatures of habit" and "slaves of suggestion." To those of regular habits the "suggestion" accompanying a certain time and place is sufficient to procure a movement; but if the time is allowed to pass on a few successive occasions, constipation results. Nothing should be allowed to interfere with this regularity, and all mental and physical exertion should, as far as practicable, be postponed until after the visit to the water-closet.

5. Stay in the water-closet for fifteen minutes, by the watch, without straining—just waiting.

6. If the attempt fails, as it often does at first, it will then be necessary to give the bowels some assistance, not with cathartics, because the more cathartics one takes the more one requires, but by the injection of a few ounces of cold water from a fountain syringe, or possibly by the use of a glycerin suppository.

Most cases of ordinary constipation will yield to this regime in a week or two, although some are stubborn enough to require more elaborate methods. Occasionally harmonal, agar, vibratory massage, or even dilatation of the sphincter may be necessary.

Diet.

The great majority of patients on leaving the hospital are in condition to resume their ordinary diet, but they are often afraid to do so unless informed of the fact, because they are convinced that some specific diet should follow every operation. The fact is, however, that convalescence is often retarded by a departure from customary habits of eating and drinking, which have become in a measure physiologic necessities.

There are, of course, certain cases requiring special systems of diet, which are often better prescribed by the physician than by the surgeon. For instance, in stomach cases the patient should be given a carefully prepared diet list and cautioned against over-

eating, while in genito-urinary cases the patients should be advised to drink water freely and avoid alcohol, etc.

Social Duties, Visitors, Etc.

Every operation means more or less nervous and physical strain, not only from the operation itself, but also from the apprehension and sleeplessness which precede and accompany it. The result is a decided loss of energy and resisting power. Even prolonged rest in bed, without other cause, is productive of considerable weakness. Under these circumstances nothing is more exhausting to a convalescent than a too rapid resumption of social duties. Hence warning should be given against dinners, parties, receptions and theatres, and especially against receiving too many visitors and indulging in prolonged conversations.

As soon as one who has been operated on returns from the hospital, every acquaintance is curious to see the result and hear all about the operation, and the defenseless patient must again and again rehearse the whole experience in all its harrowing details. This is not only exhausting, both nervously and physically (no one knows how exhausting who has not been through it), but it also prevents the mind from getting into other and less morbid channels. In this connection it may be mentioned that one of the worst things a patient can do on leaving the hospital is to go to the home of a friend. This is nearly always a strain, because it entails certain social exactions which can not be avoided and which interfere with that relaxation of body, ease of mind and freedom from obligations which are necessary to recuperation.

For all these reasons it is often desirable, when possible, for patients to go away and complete their convalescence in some interesting locality among strangers, surrounded by new scenes and free from the well-meant persecutions of their friends.

Rest and Sleep.

Too much stress can not be placed on the procuring of sufficient sleep; but unfortunately this is often difficult to get, owing

to nervous irritability and social activity. Patients should be instructed to retire early and also to lie down for a short time at least once during the day. They must also be warned against the excessive use of hypnotics, which should never be taken except under the direction of their family physician, because the drug habit is easily acquired under such circumstances and its effects are disastrous.

Going Up and Down Stairs, Riding, Etc.

Most people, for some reason, have an idea that it is harmful for those who have recently been operated on to go up and down stairs. In reality there is no danger in this except the danger of falling, which may, however, be considerable while the patient is still in a weakened condition.

Riding in almost any sort of a conveyance is nearly always permissible, providing the driver is reasonably cautious and the excursion is not too long. Street cars, railroad trains and seagoing vessels are seldom objectionable, although the question of seasickness must be considered. Horseback riding and bicycling must be approached with caution and should not be indulged in for at least a number of weeks, especially in cases of movable kidney or other forms of ptosis.

Exercise.

This is of much importance and should be encouraged, although it should of course be appropriate and judicious in amount. The patient must be made to understand that no one ever gets strong by resting too much, and that exercise and fresh air within reason are quite necessary to a rapid and satisfactory convalescence. It is especially desirable that the abdominal muscles, weakened and injured by the operation, should be strengthened by carefully graduated calisthenics, beginning with the lightest work, which is cautionsly increased until the normal tone is regained. It is better for the patient to do this slowly and carefully than to permit the muscles to remain weak and atrophied until some sudden and unavoidable strain results in serious damage. Mas-

sage is often serviceable and should be recommended more often than it is when the means of the patient permit.

Returning to Work.

Most patients desire to know on leaving the hospital how soon they can safely return to their regular occupation. This is difficult to answer because it depends so much on the nature of the work. The tendency has always been to keep people idle too long, which is detrimental to them, physically, mentally and financially, and a loss to the community also. The idea should be to get them back to their avocations as soon as this can be done. It is often better, for instance, to permit a woman to resume within proper limits many of her household duties, rather than to insist that she sit around for weeks or months in enervating and useless inactivity.

In this connection it can be said that most abdominal wounds are as strong at the end of a month or six weeks as they will ever be; and other things being equal, the majority of patients can return even to quite heavy work at that time. If there is a tendency to the formation of a rupture it will come anyhow in spite of any reasonable care, so there is but little object in waiting longer. In appendix operations done with the gridiron incision the time of probation may still further be curtailed, even to so short a period as three weeks in some instances. In cases of movable kidney the wait must be longer—say six to eight weeks—while hernia occupies an intermediate position.

Women should not be in too much of a hurry to resume the care of small children, although this is exactly what the average mother of such children is anxious to do. It is wise to try to convince her that it is good for the children and develops their character and independence to be with others for a time, and that she, the mother, can do them greater justice in the end by properly recuperating before she returns to them.

Various Postoperative Conditions.

Adhesions.—The surgeon should not neglect to explain about adhesions, because if he does not mention the subject some one

else will, and entirely wrong and disturbing notions may be the result. It should be explained that adhesions follow almost every abdominal operation, and that this is natural and proper. Nature has provided the omentum for this very purpose—to fasten together and protect internal wounds, just as we use adhesive plaster and dressings for similar purposes externally. It should be clearly understood that these adhesions are harmless, although they may pull uncomfortably for a time until they become stretched and adjusted to their surroundings. Also, it should be explained that, like the external dressings, they are usually temporary and that they tend to dissolve and disappear in the course of time.

The Eyes.—It is often desirable to direct attention to the eyes. If there is anything wrong with the accommodation of these organs, although the compensation may previously have been perfect, difficulty is apt to arise from muscular strain, following the weakening effects of a serious operation, which results in headache, dizziness and perhaps nausea. If these symptoms appear and persist, an oculist should be consulted.

Bathing.—Many patients are worried by an uncertainty as to when they may begin to take baths. It should be explained that "when a wound is well it is well," and that, other things being equal, they may begin bathing as soon as the wound is thoroughly healed and "dry"—usually in from two to three weeks after the operation.

Menstruation.—Unless something is said on this subject much uneasiness will result. It must be explained that irregularities of the menses often follow surgical operations; they may come too soon or too late, be too profuse or too scant, or even not appear at all for several months. Whatever occurs is of little importance and the function will adjust itself in the course of time without causing harm of any kind.

Conclusion.

The preceding imperfect consideration of an important subject is of course merely suggestive; there are many points which have

not even been touched on. Operations other than abdominal require individual instructions according to the nature of the case and the characteristics of the patient. For instance, where the skull and brain are concerned, it should be understood that mental exertion and excitement must be avoided for an appropriate length of time; in genito-urinary cases much water and other liquids should be consumed with the exclusion of anything containing alcohol or other irritating substances; in amputations, massage of the stump should be recommended and attention should be directed to the occurrence and persistence of reflex pains and peculiar sensations referred to the absent foot or hand, which are often disturbing, especially if not correctly understood. Patients who have had rectal trouble, those, for instance, who have been operated on for piles, must be told to avoid for at least two weeks the passage of hardened feces, making use, for this purpose, of proper cathartics and of warm saline enemas before movements of the bowels, when this seems to be necessary.—*The Journal of the American Medical Association.*

THE VALUE OF STARCH-TREATED FOODS IN THE DIETO-THERAPY OF DIABETES-MELLITUS.

"No subject in medicine has, for the past one hundred and fifty years, been given more thought, from a scientific and experimental standpoint, than diabetes, and yet no subject, as to the true pathology and etiology of which we possess proportionately less accurate information." This is the introductory paragraph of a valuable contribution on the above subject appearing in the March issue of the Medical Summary, of Philadelphia, by George Mosse Norton, M.D., who, after considering the pathology, etiology, symptomatology, and prognosis of diabetes-mellitus, says:

"Dieto-therapy offers the greatest and most rational promise of relief or cure, and is by far the sheet anchor in the treatment of

diabetes, and is more efficient than any drug or combination of drugs, and no permanent results have ever been obtained without strict diebetic supervision. Unfortunately, pharmacology has not provided any drug which acts directly upon the excitability of the sugar-forming process of the liver. All authorities agree that the diabetic wastes away and starves to death—from consuming his own tissues—through the impaired condition of the 'glycogenic function' of the liver."

He affirms that heretofore the difficulty in the successful management of diabetes has been that the patient could not assimilate foods containing carbohydrates in the form of starch as it appears in the ordinary food products, and by eliminating the starch from the products their value as a sustaining food is completely destroyed.

He also emphasizes the fact: "All the working cells of the body use sugar as their foodstuff and immediate source of energy, which, if not supplied from the food (starch) ingested, must be taken out of the tissues, and in the patient suffering from diabetes the waste from the body is more than the intake of food into the system."

The author's experience coincides with Von Noorden and other eminent authorities that the best food for the diabetic is the food containing the greatest amount of carbohydrates which they can tolerate, because in the carbohydrates is contained the greatest proportion of calories, or heat units, which go to make up the energy of life.

Dr. Norton states that while he realized that Van Noorden's deductions were correct, yet while entertaining little hope that a starchy food which a diabetic could ingest with impunity would ever be perfected, it was by a mere "coincidence" that his attention was brought to such a food. A prominent New York physician was consulted by one of Dr. Norton's diabetic patients, and was placed on a new starch-treated product known as the Jireh Diabetic Foods.

The doctor, in commenting on the case, says: "When his patient returned after three months—all the while eating the starch-treated foods—he was amazed, but agreeably surprised at the re-

markable improvement, which continued after the lapse of a year. Health, strength, and weight gradually increased on these foods, together with eggs and other suitable diet, and the sugar slowly disappeared from the urine, only traces now being present."

The author refers to the increased death rate from diabetes, and avers that "before the present process of refining, bolting, and bleaching flour became common, there were few cases of diabetes in either men or women, but of late years from the constant ingestion of insoluble starchy foods, this disease has increased with leaps and bounds. He points out the amazing fact that the rapid increase in the death rate from diabetes has kept pace with the "patent roller" process of manufacturing flour.

The doctor in describing the process of treating the starch says, "Each starch granule in cereal food products is inclosed in a tough envelope that the process of grinding does not break. To render these easy of digestion, without the formation of sugar in the diabetic, is the secret of these starch-treated foods."

"The starch granules are thoroughly broken up by diathermous fermentation, produced by the addition of certain digestive enzymes to the flour, which, after thorough trituration, is subjected to a certain degree of heat for a specified period of time, by especially constructed machinery, designed for this particular purpose."

"The above treatment applied to a whole-wheat-stone-ground flour, followed by the scientific application of heat, causes a commingling of the carbo-hydrate and nitrogen molecules of the starch granules of the wheat berry, resulting in a very slight fermentation leading to division and expansion, after ingestion, and to final disintegration in the small intestine."

The author refers to the mineral constituents of the wheat berry as follows: "The wheat berry contains about 75 per cent of starch, and in combination are certain other constituents—gluten, nitrogen, carbon, chlorine, calcium, phosphorus, sulphur, sodium, potassium, ferrum, magnesium, and fluoric acid. Nature placed the above named mineral or cereal salts into the wheat berry that the Biblical injunction might be fulfilled that bread would really be the 'staff of life', but to change the starch in flour from

which the above cereal salts have been eliminated—by present day method of milling—is impossible, and it is likewise impossible to render it soluble so that the dextrin and glucose can be appropriated and oxidized by the various ferments of the digestive tract." Referring to the physiologic and therapeutic value of Jireh Products the author summarizes as follows:

The foods are manufactured from a whole-wheat-stone-ground-starch-treated flour in which is retained all of the starch and cereal salts so necessary to sustain and build up the depleted system of diabetic sufferer. The ingestion of these foods will assist in equalizing sugar production to sugar requirements, by enabling the defective function of the diabetic's liver to fix the starch and store the sugar as "glycogen" to be used, as force and energy, as in health.

In closing the author says: "There are ten reasons why foods made from starch-treated flour are superior foods in the dietetic treatment of diabetes.

1. The wheat from which these food products are manufactured is selected from the choicest grade of wheat and ground on the "old-fashioned" Buhr millstone.

2. These foods are manufactured from an entire whole-wheat-stone-ground flour, because the best part of the nutrient is under the shell where the phosphate of potash and other cereal salts—absolutely demanded by the body for its proper sustenance—are found.

3. The flour from which these foods are manufactured is subjected to a diathermous fermentation, which produces certain changes in the carbo-hydrate or starch granules, but retains all the food value of the starch and cereal salts.

4. The change in the starch is slight but sufficient to facilitate its rapid change into a form of sugar to sustain the body in a healthy condition.

5. The foods are palatably delicious and satisfying as compared with the insipid and obnoxious devitalized gluten foods.

6. They contain all the mineral constituents of the whole wheat berry so necessary to maintain the vitality of the human body.

7. The starch is not changed into indigestible dextrine or glucose.

8. No chemicals whatsoever are employed in the treatment of the starch.

9. These starch-treated food products are high in food value.

10. They are physiologically correct.

Extracts from Home and Foreign Journals.

SURGICAL

The Use of Local Anaesthesia for the Reduction of Fractures.

According to Prof. H. Braun (*Deut. med. Wochensch.*, No. 1, 1913) Lerda and Zuenn have been very successful in reducing and treating fractures without pain, by means of local anæsthesia with a one-half of one per cent cocain solution. His own results in 50 cases of subcutaneous fractures and dislocations have been equally satisfactory. His method consists in injecting a 1 per cent novocain-suprarenin solution, the pain subsiding in a few minutes and remaining absent for a considerable time. In three cases of fracture of the radius where 10 ccm. of the anæsthetic solution were used reduction was unattended with the least pain, while in seven cases of fractures of the forearm the method of plexus anæsthesia produced complete muscular relaxation and loss of sensation. Backward dislocation of the forearm, as well as supracondylar fracture of the arm with dislocation, could be reduced without the least suffering. In fifteen cases of luxation of the shoulderjoint plexus anæsthesia was employed ten times and inter-articular injection in five more recent cases. In making the latter 10 ccm. of the novocain-suprarenin solution were injected just beneath the acromion into the joint and another 10 ccm. down to the head of the humerus, which was located below the clavicle. The author reports favorable results in fractures of the ankle, leg and knee, and in dislocations at the hip-joint. No deleterious effects were ever observed.—*International Journal of Surgery.*

Ureteral Obstruction.

B. Tenney states that two symptoms appear in almost every condition which obstruct a ureter. One is pain between the point of obstruction and the tenth rib, on the obstructed side. The pain varies from a dull ache to agony and may produce anything from nervous irritability to vomiting and unconsciousness. This pain is sometimes increased by motion, as in stone cases, sometimes brought on by a change from the horizontal to the upright position, as in cases with ureteral kink, and sometimes appears without regard to either, as in pus or bleeding kidneys when the patient's pain comes and goes quickly with the passage of some fibrin mass through the ureter. Pain is present when there is back pressure in the kidney and may be associated with vomiting and fever, or it may be associated with vomiting and a normal temperature, or there may be subnormal temperature. The pain is said to radiate along the affected side down to the penis or vagina or leg, but the author's patients have had most of their pain in the back in the region of the twelfth rib. Radiation—unless pelvic pain be considered such—has been uncommon in the author's cases. Cases with pain on the unaffected side have been reported on good authority. The pain may be recent or of long standing. Pain is what the patient describes without examination. Tenderness may correspond in location or differ. When a patient is in pain from ureteral obstruction he is also tender over the affected kidney. When he is not in pain the tenderness may and often does disappear. In women the ureteral insertion, which can almost always be felt through the vagina, will be found sensitive if there is infection behind a point of obstruction, and often while the infection remains a bacteriuria. The other constant symptom is an alteration from the normal habits of urination. One may find increased frequency, urgency, incontinence, or the necessity of repeated attempts before the desire passes away. The presence of any one of these symptoms is a plain warning that something is wrong in the urinary tract—not necessarily in the kidney—and calls for further study.—*Med. Rec.*

MEDICAL

Raw Meat Juice in Intestinal Tuberculosis.

The use of raw meat juice in intestinal tuberculosis is not a mere dietery fad. It is based on recent and sound experimental facts and observations of the best physicians. The amount to be taken daily to be efficacious is the juice of 2 lbs. fresh meat. The juice must be expressed as soon as possible after the animal is slaughtered. The meat should be preserved in an ice-box and under aseptic conditions. The juice is highly unstable and develops toxic properties within an hour or so, and hence it should be expressed every time fresh and collected in a vessel surrounded by ice. The process is troublesome, but it is worth doing it.

The good results are not due to hyper-alimentive ,since by far the greater part of the nutritive principles remains in the meat. The specific elements are contained exclusively in the meat juice. The solid components of meat have not therapeutical action on tubercle. Note, that cooking destroys the specific principles.

The Process of Preparing the Juice.—A quarter pound of fresh goat's meat is quickly chopped fine and pounded in a stone mortar. After it has been reduced to a pulp, an ounce of cold water is poured on it and again it is pounded a little. A few leaves of mint or coriander may be added to flavor it. The whole mass is then squeezed in a clean piece of muslin and the clear red colored juice is administered immediately to the patient. He should be fed every third hour with an equal quantity of freshly prepared juice. Fowl meat can be used instead of mutton. I think the use of goat's meat is the best as that animal is immune to tubercle. Raw meat juice in intestinal tubercle is not a new invention by European physicians, but it has been highly spoken of in ancient Hindu Medical works written over a thousand years ago.—*Practical Medicine.*

Treatment of Aortic Aneurysm.

Pierret and Duhot (*Echo medical du Nord*) report three new cases of aneurysm in which an intravenous injection of 0.6

gramme of salvarsan brought prompt relief from previously continuous pain. In each of these cases the Wassermann reaction was positive, and in none did any untoward results follow. In one case the pain returned in three weeks, after a long walk, but was gradually again relieved by a series of twenty injections of benzoate of mercury. In no instance was the size of the aneurysm, as shown by radiography, diminished by the treatment. They believe salvarsan to be without danger in aneurysms of moderate size, provided no other contraindicating lesions are present. The blood pressure is practically uninfluenced by the remedy, the tendency being rather toward a slight fall than a rise. Pain and dyspnea are relieved much more quickly than by mercury. In view of the undoubted efficacy of the latter agent and its more ready administration, however, Pierret and Duhot believe it should be reserved for cases in which daily mercurial injections and full doses of potassium iodide have failed to benefit. *Charlotte Medical Journal.*

OBSTETRICAL

Second Operation for Extra-Uterine Pregnancy.

Stuart McGuire, of Richmond, *Old Dominion Journal,* January, 1913, in a series of thirty-five cases, had five requiring a second operation, six that bore normal children, the remainder not being traceable. Richard R. Smith, of Grand Rapids, tabulated 2,998 cases of operation for ectopic gestation with recurrence in 113—3⅛%. Three of Smith's thirty personal cases subsequently bore children normally. In discussing the difficult problem of radical operation, sterilizing the patient, McGuire sagely remarks that all of the women who had a repetition of the ectopic pregnancy favored it and all who had borne normal children disapproved, and he emphasizes that the patient before operation is not in a position to judge correctly. The operator must therefore decide according to social conditions, as age, desire for offspring, number of previous children, and also with regard to the pathologic states encountered.—*Buffalo Medical Journal.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

TENNESSEE STATE MEDICAL ASSOCIATION.

The annual meeting of the Tennessee State Medical Society has just come to a successful close. This meeting was one of the best in point of attendance and character of the scientific matter presented in the history of the association. More than three hundred and fifty physicians were in attendance. Many interesting papers were read, and without wishing to slight any we want to compliment Dr. Crile of Cleveland, on his paper dealing with shockless operations. It was not only valuable for what it represents, but also because Dr. Crile's work is an inspiration to all, young and old, to do scientific as well as research work. There were also several good papers on Hygiene and Sanitation, which we think should always form a prominent part of the program of any medical society.

Dr. D. L. Flanary read an exhaustive and interesting paper on "Business Side of Medical Practice," which should have provoked more discussion from the city physician than it did. Unfortunately for the young practitioner the older members of our profession lose interest in the financial side of medicine and seem to consider discussion of such matter beneath their dignity. This is wrong and selfish, and any well known practitioner who leads a movement for the improvement of the economics of medical practice will not only find willing helpers but will do much to perpetuate his name in the medical history of Tennessee.

A noteworthy matter brought before the society and passed was

protection for a small fee of all members in good standing against malpractice suits. This is another move binding the profession closer together.

An enjoyable smoker by the local profession was tendered the visitors Wednesday evening. The meeting adjourned sine die Thursday afternoon after the election of the following officers for the ensuing year:

President, W. D. Haggard; Vice Presidents, for Middle Tennessee, Dr. E. M. Holmes, Murfreesboro; West Tennessee, Dr. Robert Mann, Memphis; East Tennessee, Dr. H. P. Larrimore, Chattanooga. Secretary, Dr. Perry Bromberg, Nashville. Counsellors, First District, Dr. T. J. Cobb, Shelbyville; Second District, Dr. S. K. Miller, Knoxville; Fourth District, Dr. Walter Dotson, Gallatin; Sixth District, Dr. Jos. T. Gallagher, Nashville; Eighth District, Dr. B. V. Yancey, Jackson; Tenth District, Dr. B. Dixon, Covington. Trustee, Dr. C. J. Broyles, Johnson City. Delegates to American Medical Association, A. B. Cooke, M.D., Nashville; alternate, W. S. Farmer, M.D., Cookeville; S. M. Miller, M.D., Knoxville; alternate, George R. West, M. D., Chattanooga. W. T. B.

Dr. W. D. Haggard.

Dr. W. D. Haggard, though a young man, was unanimously elected President of the Tennessee State Medical Society. We wish to congratulate both the doctor and the society. The one, because his colleagues have rendered him this signal honor, the other, because it has chosen a man so well suited to the position, not only because he is a skilled surgeon, but also because he is a man of national reputation, a good mixer and an eloquent orator. Dr. Haggard also has the honor of being secretary of the Southern Surgical and Gynecological Society, and we venture to predict that some day he will be president of that well known association. Here's hoping. W. T. B.

Dr. Flavel B. Tiffany Sends Greetings.

Dr. Tiffany is now making a tour of the world, visiting the Eye and Ear Clinics of the principal hospitals and colleges.

While in India he made a special study of the celebrated Indian operation for cataract, with the originator, Col. Smith, of Bombay.

Dr. Tiffany expects to return the last of April, when he will be pleased to see his friends and patrons at his office, 805 McGee Street, Kansas City, Mo.

Dear Doctors

If you did not attend the last meeting of the Middle Tennessee Medical Association you missed one of the best scientific programs ever presented before a medical society in the State, to say nothing of the very delightful social features of the occasion.

The next meeting will be held in Dickson on Thursday and Friday, May 15, 16, 1913.

You are invited to read an essay, the title of which must be received by the Secretary not later than May 1. If you intend writing a paper send your subject now before you forget it. The officers of the association would like to insist on more papers from the country physicians. They have not been doing their duty in this respect, much to their discredit and to the sacrifice of the best interests of the society.

If you have not been attending the Middle Tennessee we invite you to come to this meeting and see what you have been denying yourself and us. We shall be glad to have you on the program.

Our last meeting was a record breaker. Let every one pull for the best one yet at Dickson. Come and bring a new member.

Fraternally yours,

R. W. Billington,

Sec. and Treas.

The Glasgow Lister Ward and Museum.

As a memorial to the late Lord Lister, and as a means of perpetuating his memory in a way that it is hoped will prove both

interesting and instructive to every member of the medical profession for all time to come, one of the wards in the Royal Infirmary, Glasgow, in which he worked out and first put into practice the principles of antiseptic surgery, is to be reserved and utilized in the following way. One part of the ward is to be refurnished as it was in his time with such objects as it may be possible to acquire; while the other part is to be made into a museum for the exhibition of anything associated with the life and work of the great master.

It is, therefore, asked that any who may have letters, pamphlets, books or other objects of direct personal association with Lister and his work will either present or loan them to the museum.

Prof. John H. Teacher, M.D., Hon. Curator of the museum, will be pleased to receive any objects addressed to him at the Royal Infirmary, Glasgow, Scotland.

The names of all donors or senders of objects are to be affixed to the exhibits.

Dental Interne (Male).

April 2, 1913.

The United States Civil Service Commission announces an open competitive examination for dental interne, for men only, on April 2, 1913, at the places mentioned in the list printed hereon. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position at $600 per annum, with maintenance, in the Government Hospital for the Insane, Washington, D. C., and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The department states that it reserves the right to terminate the appointment at the expiration of one year of service if it is deemed advisable to do so.

As insufficient eligibles were secured from the examination

for this position held December 11, 1912, qualified persons are urged to enter this examination.

In addition to the many interesting cases presented, the dental interne is given an excellent opportunity for study and for doing experimental and research work in the pathological, histological, and other laboratories of the institution.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

Subjects.	*Weights.*
1. Letter writing (the subject matter on a topic relative to the practice of dentistry)	5
2. Anatomy and physiology (general questions on these branches, also with special reference to the teeth, mouth, and head)	10
3. Chemistry, materia medica, and therapeutics (the preparation, properties, and reactions of chemicals, crude drugs and their preparations, their action and application, with those of other therapeutic agencies)	15
4. Dental pathology and oral surgery (the morbid processes incident to diseases and injuries of the teeth, mouth, and contingent structures, and their surgical treatment)	20
5. Operative and prosthetic dentistry (the detailed technics of general and special operative and laboratory work	25
6. Bacteriology, histology, and hygiene (the cultivation, isolation, demonstration of bacteria, the principles of sterilization, mounting specimens, use of microscope, the principles of general and oral hygiene, etc.)	10
7. Orthodontia (local and constitutional irregularities in growth and development of the teeth, and their correction)	15
Total	100

Applicants are required to be graduates of regularly incorporated dental colleges, and applications will not be accepted from persons who have been graduates more than two years.

Statements as to training, experience, and fitness are accepted subject to verification.

Applicants must be unmarried.

Age, 20 years or over on the date of the examination.

This examination is open to all male citizens of the United States who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the board of examiners at any place mentioned in the list printed hereon, for application and examination Form 1312. No application will be accepted unless properly executed and filed with the Commission at Washington. In applying for this examination the exact title as given at the head of this announcement should be used.

As examination papers are shippeed direct from the Commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The Commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

Issued February 25, 1913.

Reviews and Book Notices

The Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume II, No. 1 (February, 1913). Octavo of 179 pages, illustrated. Philadelphia and London. W. B. Saunders Co., 1913. Published Bi-Monthly. Price per year, paper, $8; Cloth, $12. W. B. Saunders Co., Philadelphia, London.

Our acknowledgments are due the obliging publishers for a copy of this invaluable quarterly publication. As with former numbers, this one is full of good things. These clinics show what a great surgeon is doing, and illustrates fully the trend of surgical progress at the hands of the leading exponent of surgery in the United States. Every lecture is replete with excellent instruction, and to one who can not have the advantage of hearing the lectures delivered in *propria persona,* they are valuable in the extreme. Among the excellent lectures is one on the Open Treatment of Fractures, by Mr. W. Arbuthnot Lane, of London, which of itself is worth the price of the book. Every one who wishes to keep in the van of surgical work should subscribe to Murphy's Clinics.

Epidemic Cerebrospinal Meningitis.—By Abraham Sophian, M.D., formerly with New York Research Laboratory. Twenty-three Illustrations. St. Louis. C. V. Mosby Co., 1913.

We are in receipt from the enterprising publishers, C. V. Mosby Co., of St. Louis, of a copy of this timely monograph. The recent prevalence of this terrible disease in many sections of the country and its distressing mortality make the appearance of such a work particularly welcome to the profession. This work has the distinction of being the only monograph in English on this important disease. The opportunities of the author in the research laboratory of New York and in the epidemic of the disease in Texas in 1912, has been unusually great and have placed him in a very authoritative position to write upon the disease. The author's object has been in this work to describe the clinical and laboratory findings of the disease and to familiarize the readers with their application in treatment and the clinical analysis of the disease. A very useful work and one that should meet with a wide acceptance from the profession.

Publisher's Department

"It is during the spring months more particularly that the physician is called upon to treat patients, who though not ill enough to be in bed, are not at all well. Their appetite is capricious, they sleep indifferently, or even if they sleep soundly they are not refreshed, and in the morning they are almost as fatigued and ill at ease as was the case on retiring. Upon awakening there is frequently an aching sensation in the loins sometimes in the lower limbs, which may partially wear off as the day progresses, but there is at all times a vague, undefined, uneasy painful feeling.

The symptoms are very much like those experienced in malaria, but the causes are entirely different and a different treatment is necessary.

This condition arises from the fact that in the spring the eliminative functions do not present their usual activity owing to the torpor and locked-up secretions which have existed during the winter months, when the skin neglects its duties and the kidneys are overworked.

If the condition remains neglected the probable result will be sooner or later a pronounced attack of rheumatism or grip in one or another of its forms. All this is needed to induce such an attack is a sudden change in the weather or the exposure on the part of the patient to cold or wet or to a combination of both. This is due to a latent diathesis to which every adult is liable.

The necessity of a powerful eliminative in every prescription for rheumatism and grip is self-evident. While anti-pyretics and anti-periodics may slightly stimulate the excretions and relieve congestion, thereby controlling certain features of the disease, a complete cure can not be expected until the poisons are thoroughly eliminated from the system and the diseased organs enabled to resume normal functions.

In the treatment of all rheumatic, neuralgic and grippy conditions, Tongaline, by promoting the absorptive powers of the various glands which have been clogged, and by its stimulating action upon the liver, the bowels, the kidneys and the skin, will

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Contents for April, 1913

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"	Iron - - - -	1½ "
"	Quinine - -	¾ "
"	Manganese -	1½ "
"	Strychnine -	1-16 "

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"	Calcium - - - - - - - -	4 "
"	Iron - - - - - - - - - -	2 "

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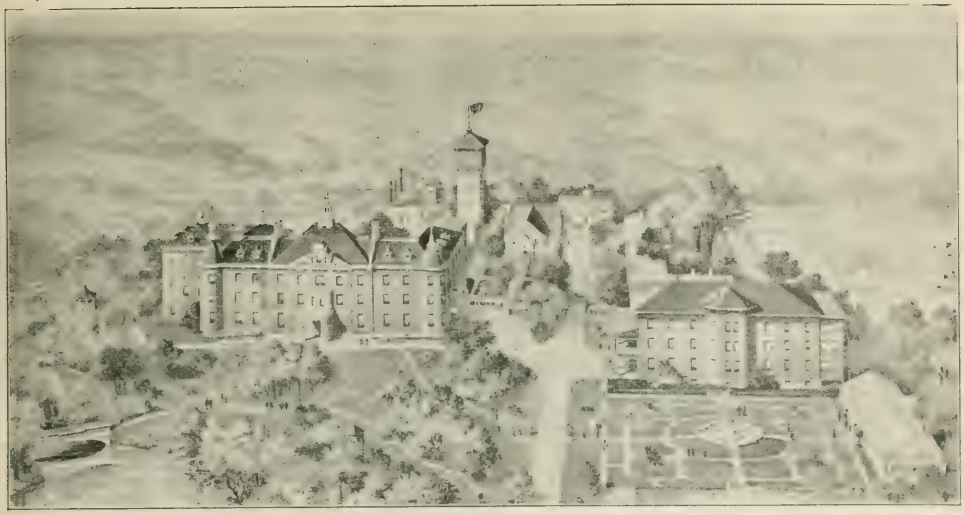

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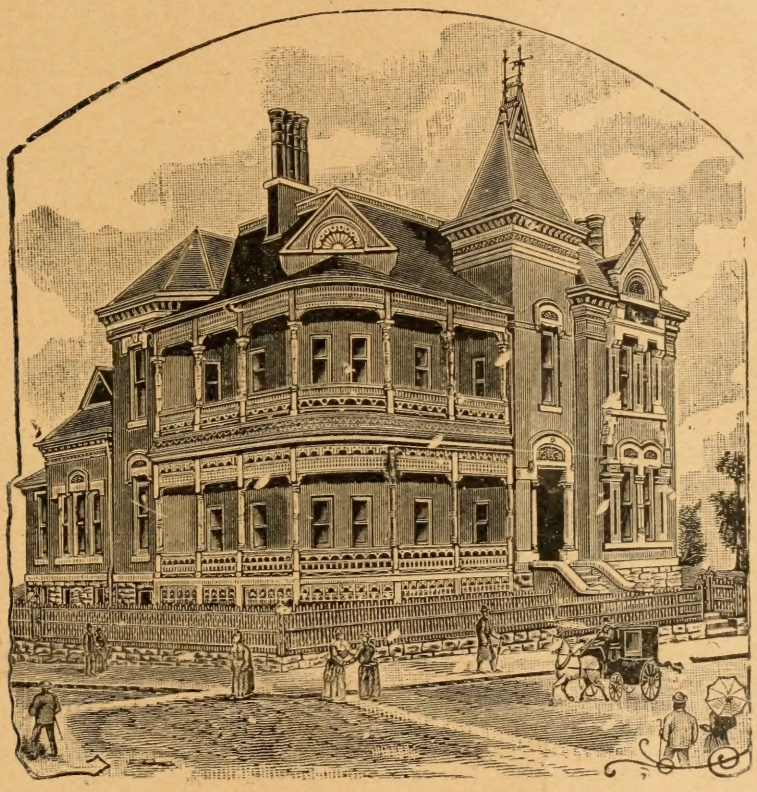

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